Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of separating immiscible liquids in a dispersion comprising an aqueous liquid and at least one non-aqueous liquid immiscible in the aqueous liquid and wherein the non-aqueous liquid is dispersed in the aqueous liquid, comprising:

a) feeding the dispersion from a feed supply to a ~~chamber housing~~ primary vessel having a plurality of coalescing compartments, in a first direction through the compartments from an initial upstream compartment to a final downstream compartment;

b) partially coalescing the dispersed non-aqueous liquid through all the coalescing compartments;

c) recovering a partially coalesced emulsion of said liquids, after passage through all the coalescing compartments downstream of said final downstream compartment, and

d) periodically discontinuing the feeding in said first direction and feeding said emulsion in a second direction, counter to said first direction, such that said final downstream compartment of a) becomes a second direction initial upstream compartment and said initial upstream compartment of a) becomes a second direction final downstream compartment,~~.~~

wherein the coalescing compartment contains a coalescing media with a substantially homogeneous porous mass, the porous mass including a network

<u>of fine filaments and substantially uniform sized open cells in the filaments, wherein the coalescing media can separate non-aqueous emulsions from the aqueous phase having a droplet diameter of at least 0.5 μm.</u>

2. (Original) A method according to claim 1, further comprising:

e) feeding the partially coalesced emulsion to a polishing vessel, housing at least one polishing coalescing compartment, in a first polishing direction;

f) partially coalescing the emulsion in the at least one polishing coalescing compartment;

g) recovering a polished aqueous phase and a polished non-aqueous phase, and

h) periodically discontinuing the feeding of the partially coalesced emulsion in said first polishing direction and feeding said emulsion in a second polishing direction, counter to said first polishing direction, such that a final downstream polishing compartment becomes an initial upstream polishing compartment and said initial polishing compartment becomes a final downstream compartment.

3. (Original) A method according to claim 2, wherein the polishing vessel includes only one coalescing compartment.

4. (Previously Presented) A method according to claim 2, wherein the dispersion also contains solids.

5. (Original) A method according to claim 4, wherein a solids stream is further recovered in g) from the polishing vessel.

6. (Previously Presented) A method according to claim 1, wherein the method is continuous or discontinuous.

7. (Previously Presented) A method according to claim 1, wherein the method is continuous.

8. (Original) A method according to claim 1, further comprising monitoring a differential pressure of the said initial upstream compartment of a) as a means of measuring a level of blockage in said initial upstream compartment, and performing d) in response to the a predetermined level of blockage in the initial upstream compartment.

9. (Original) A method according to claim 1, wherein the plurality of coalescing compartments is at least three.

10. (Original) A method according to claim 9, wherein the plurality of coalescing compartments is six, the compartments being disposed in two parallel series of three coalescing compartments.

11. (Cancelled)

12. (Currently Amended) A method according to claim ~~11~~ 1, wherein the porous mass has an absorption or adsorbent character effective to trap dispersed non-aqueous droplets for coalescence, and readily release coalesced droplets of the non-aqueous liquid.

13. (Previously Presented) A method according to claim 11, wherein the porous mass has a non-compressed state.

14. (Original) A method according to claim 13, wherein the porous mass in the non-compressed state has a non-compressed density varying from

1.5 to 2.5 lbs/ft^3; a void space from 80% to 98%: and 65 to 120 pores per linear inch.

15. (Previously Presented) A method according to claim 11, wherein the porous mass has a compressed state.

16. (Original) A method according to claim 15, wherein the porous mass in the compressed state has a compressed density varying from 2.5 to 19 lbs/ft^3; a void space of from 60% to 80%; and 120 to 900 pores per linear inch.

17. (Previously Presented) A method according to claim 11, wherein the cells have a cell wall thickness between 40 and 55 μm.

18. (Previously Presented) A method according to claim 11, wherein the cells have a cell diameter between 160 and 220 μm.

19. (Previously Presented) A method according to claim 11, wherein the coalescing media is of a polymer selected from the group consisting of polyurethane, polyester, polystyrene, polypropylene and polyethylene.

20. (Original) A method according to claim 19, wherein the coalescing media is of polyurethane.

21. (Currently Amended) An apparatus for separating immiscible liquids in a dispersion comprising an aqueous liquid and at least one non-aqueous liquid immiscible in the aqueous liquid and wherein the non-aqueous liquid is dispersed in the aqueous liquid, comprising:

a primary vessel including;

an inlet means through which the dispersion enters the vessel and producing a flow within the vessel in a first direction;

an outlet means through which a partially coalesced emulsion leaves the vessel;

a plurality of coalescing compartments which the dispersed non-aqueous liquid partially coalesces to produce the partially coalesced emulsion; the compartments including a first direction upstream compartment and a first direction last downstream compartment;

a flow direction changing means acting on the inlet means and the outlet means for periodically changing the flow within the vessel to a second direction counter to the first direction, such that said first direction upstream compartment becomes a second direction last downstream compartment and said first direction last downstream compartment becomes a second direction upstream compartment

whereby the partially coalesce emulsion leaving the vessel has passed through all the coalescing compartments,~~.~~

wherein the coalescing compartments contains a coalescing media with a substantially homogeneous porous mass, the porous mass including a network of fine filaments and substantially uniform sized open cells in the filaments, wherein the coalescing media can separate non-aqueous emulsions from the aqueous phase having a droplet diameter of 0.5 μm.

22. (Original) An apparatus according to claim 21, further comprising:

a transferring means, communicating between said primary vessel and a polishing vessel;

the polishing vessel including;

a polishing inlet means through which the partially coalesced emulsion enters the polishing vessel in a first polishing direction;

at least one polishing coalescing compartment in which the partially coalesced liquid further coalesces to produce a polished non-aqueous phase and a polished aqueous phase;

a polished non-aqueous phase outlet means; and

a polishing outlet means through which a polished aqueous phase leaves the polishing vessel, and

a polishing flow direction changing means acting on the polishing inlet means and the polishing outlet means for periodically changing the flow within the polishing vessel to a second polishing direction counter to the first polishing direction.

23. (Previously Presented) An apparatus according to claim 21, wherein the apparatus operates in a continuous or discontinuous mode.

24. (Original) An apparatus according to claim 23, wherein the apparatus operates in a continuous mode.

25. (Original) An apparatus according to claim 22, wherein the polishing vessel further includes a solids removal outlet means for the removal of solids in the dispersion.

26. (Original) An apparatus according to claim 21, wherein the plurality of coalescing compartments is at least 3.

27. (Original) An apparatus according to claim 26, wherein the plurality of coalescing compartments is 6 and the compartments are arranged in two parallel series of three coalescing compartments.

28. (Original) An apparatus according to claim 27, wherein the coalescing compartments are disposed vertically.

29. (Original) An apparatus according to claim 21, wherein the primary vessel is cylindrical, disposed horizontally and includes heads.

30. (Original) An apparatus according to claim 21, wherein the coalescing compartments are disposed vertically in the cylindrical vessel to produce compartments with a circular cross section of the flow in the first direction.

31. (Original) An apparatus according to claim 22, wherein the polishing vessel is cylindrical, disposed horizontally and includes heads.

32. (Original) An apparatus according to claim 22, wherein the number of polishing coalescing compartments is one, disposed vertically in the cylindrical vessel to produce a circular cross section in the first polishing direction.

33. (Original) An apparatus according to claim 22, wherein the polishing vessel is cylindrical, disposed vertically and includes heads.

34. (Original) An apparatus according to claim 22, wherein the number of polishing coalescing compartments is one, disposed horizontally.

35. (Original) An apparatus according to claim 21, wherein

the primary vessel is disposed horizontally and comprises;

a cylindrical housing having a top wall, ends, and heads mounted on the ends of the housing;

a first inlet mounted centrally on the housing and two inlets mounted on the heads;

three outlets mounted on the top wall, a first outlet centrally mounted between two outlets adjacent to the ends;

six coalescing compartments mounted vertically and spaced substantially equally throughout the housing, each coalescing compartment and being separated by a liquid compartment,

the flow in the first direction is established with a first control valve opening to allow the dispersion into the first inlet, a second control valve remaining closed, a third control valve opened to collect the partially coalesced emulsion from the two outlets adjacent to the ends, and a fourth control valve closed;

the flow in the second direction is established with the first control valve closed, the second control valve opened to allow the dispersion to flow into the each of the two inlets mounted on the heads, the third control valve is closed and the fourth control valve opening to allow the first outlet centrally mounted on the housing to allow the partially coalesced emulsion to leave the primary vessel; and

differential pressure controllers measuring differential pressure across each of the coalescing compartments, the differential pressure increasing with time, at a particular pressure and at a particular time interval the controllers actuating the control valves and changing the flow from the first direction to the second direction, after the time interval has passed for a second time, the

controllers actuating the control valves and changing the flow from the second direction to the first direction.

36. (Original) An apparatus according to claim 22, wherein the transferring means is a pipe connecting the primary vessel and the polishing vessel;

the polishing vessel is disposed horizontally and comprises

a cylindrical housing having a top wall, ends and heads mounted on the ends of the housing;

one polishing coalescing compartment mounted vertically located at the center of the housing

an polishing inlet and a polishing outlet through which the partially coalesced emulsion and the polished aqueous phase are interchangeable passed;

the polishing flow in the first polishing direction is established with a first polishing control valve open allowing the emulsion into the polishing vessel through a port on the first head, a second polishing control valve is closed, a third polishing control valve is closed and a fourth polishing control valve is open allowing the polished aqueous phase to leave the polishing vessel;

the polishing flow in the second polishing direction is established with a first polishing control valve closed, a second polishing control valve is open allowing the emulsion into the polishing vessel through a port on the first head, a third polishing control valve is open allowing the polished aqueous phase to leave the polishing vessel and a fourth polishing control valve is closed; and

differential pressure controllers measuring differential pressure across each of the polishing coalescing compartment, the differential pressure increasing with time, at a particular pressure and at a particular time interval the controllers actuating the control valves and changing the flow from the first polishing direction to the second polishing direction, after the time interval has passed for a second time, the controllers actuating the control valves and changing the flow from the second polishing direction to the first polishing direction.

37. (Cancelled)

38. (Currently Amended) An apparatus according to claim ~~37~~21, wherein the porous mass has an absorption or adsorbent character effective to trap dispersed non-aqueous droplets for coalescence, and readily release coalesced droplets of the non-aqueous liquid.

39. (Currently Amended) An apparatus according to claim ~~37~~21, wherein the porous mass has a non-compressed state.

40. (Original) An apparatus according to claim 39, wherein the porous mass in the non-compressed state has a non-compressed density varying from 1.5 to 2.5 lbs/ft^3; a void space from 80% to 98%: and 65 to 120 pores per linear inch.

41. (Currently Amended) An apparatus according to claim ~~37~~21, wherein the porous mass has a compressed state.

42. (Original) An apparatus according to claim 41, wherein the porous mass in the compressed state has a compressed density varying from 2.5 to 19 lbs/ft^3; a void space of from 60% to 80%; and 120 to 900 pores per linear inch.

43. (Previously Presented) An apparatus according to claim 37, wherein the cells have a cell wall thickness between 40 and 55 μm.

44. (Previously Presented) An apparatus according to claim 37, wherein the cells have a cell diameter between 160 and 220 μm.

45. (Previously Presented) An apparatus according to claim 37, wherein the coalescing media is of a polymer selected from the group consisting of polyurethane, polyester, polystyrene, polypropylene and polyethylene.

46. (Original) An apparatus according to claim 45, wherein the coalescing media is of polyurethane.

47. (Original) In an apparatus for separating immiscible liquids in a dispersion comprising an aqueous liquid and at least one non-aqueous liquid immiscible in the aqueous liquid and wherein the non-aqueous liquid is dispersed in the aqueous liquid and a coalescing media is used for separating the liquids in the dispersion by passing the dispersion through the coalescing media,

the improvement wherein

the coalescing media includes a substantially homogeneous porous mass, the porous mass including a network of fine filaments and substantially uniform sized open cells in the filaments, wherein the coalescing media can separate non-aqueous emulsions from the aqueous phase having a droplet diameter of 0.5 μm.

48. (Original) An apparatus according to claim 47, wherein the porous mass has an absorption or adsorbent character effective to trap dispersed

non-aqueous droplets for coalescence, and readily release coalesced droplets of the non-aqueous liquid.

49. (Previously Presented) An apparatus according to claim 47, wherein the porous mass has a non-compressed state.

50. (Original) An apparatus according to claim 49, wherein the porous mass in the non-compressed state has a non-compressed density varying from 1.5 to 2.5 lbs/ft^3; a void space from 80% to 98%: and 65 to 120 pores per linear inch.

51. (Previously Presented) An apparatus according to claim 47, wherein the porous mass has a compressed state.

52. (Original) An apparatus according to claim 51, wherein the porous mass in the compressed state has a compressed density varying from 2.5 to 19 lbs/ft^3; a void space of from 60% to 80%; and 120 to 900 pores per linear inch.

53. (Previously Presented) An apparatus according to claim 47, wherein the cells have a cell wall thickness between 40 and 55 μm.

54. (Previously Presented) An apparatus according to claim 47, wherein the cells have a cell diameter between 160 and 220 μm.

55. (Previously Presented) An apparatus according to claim 47, wherein the coalescing media is of a polymer selected from the group consisting of polyurethane, polyester, polystyrene, polypropylene and polyethylene.

56. (Original) An apparatus according to claim 55, wherein the coalescing media is of polyurethane.

57. (Previously Presented) A method according to claim 11, wherein the coalescing medium separates non-aqueous emulsions from the aqueous phase having a droplet diameter of 0.5 micron.

58. (Previously Presented) An apparatus according to claim 37, wherein the coalescing media separates non-aqueous emulsions from the aqueous phase having the droplet diameter of 0.5 micron.